

Additional Resources to Help Your Community be Flood Ready

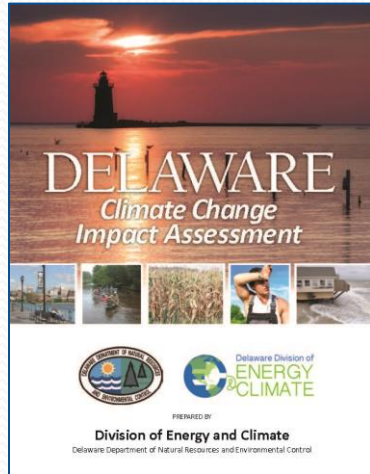


Your Flood-Ready Tool Kit

- Facts and Figures
- Helpful Guides
- Local Trainings
- Real Time Flood Data
- Maps
- Funding Sources
- People



Facts and Figures for the Future



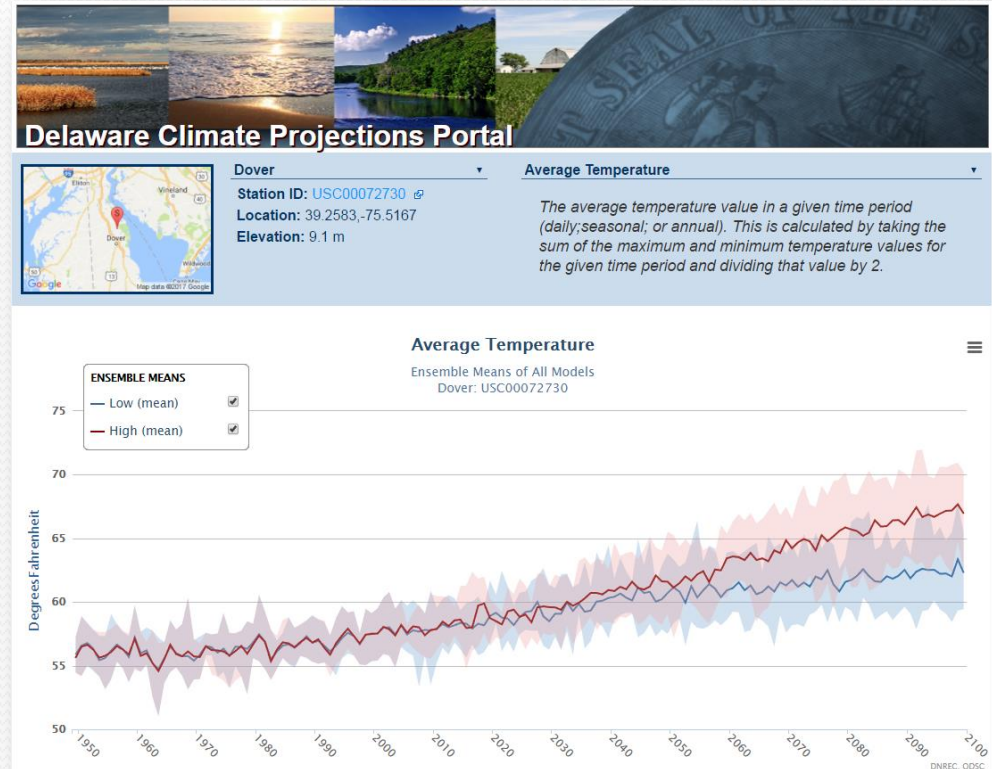
<http://www.dnrec.delaware.gov/energy/Pages/The-Delaware-Climate-Impact-Assessment.aspx>



<http://de.gov/slrva>

Future Temperature and Precipitation Trends


- Information resulting from climate model runs conducted for the Delaware Climate Change Impact Assessment
- Data visualization
- Data downloads



<http://climate.udel.edu/declimateprojections/>

How To Info:

- DE Sea Grant Natural Hazard and Climate Change Adaptation Tool Kit
 - <http://www.deseagrant.org>
- Georgetown Law Adaptation tool kit
 - <http://www.georgetownclimate.org/resources/adaptation-tool-kit-sea-level-rise-and-coastal-land-use>
- Green Infrastructure Primer
 - <http://de.gov/greeninfrastructure>
- FEMA Guidance
 - www.Floodsmart.gov
- Live Trainings and Workshops
 - [Delaware Coastal Training Program](#)
 - Delaware Sea Grant
 - Floodplain Management Program



COASTAL TRAINING PROGRAM
Delaware National Estuarine Research Reserve

As a part of our mission, the Delaware National Estuarine Research Reserve is committed to promoting informed decision making through the Delaware Coastal Training Program. This program addresses critical coastal resource management issues in Delaware by providing current scientific information, access to technologies and skill-building opportunities to Delawareans responsible for making decisions about the state's coastal resources.

The Coastal Training Program's activities range from technical assistance, seminars, hands-on skill training, and participatory workshops to lectures and technology demonstrations. Through these programs, coastal resource decision makers also have opportunities to share experiences, network in a multidisciplinary setting, and participate in field activities. Past workshops covered subjects such as sea level rise in Delaware, wetlands restoration techniques, public issues and conflict management, and social media skills.

For more information, please contact Kelly Valencik, the Coastal Training Program Coordinator at kelly.valencik@state.de.us or (302) 739-6377.

Technical Assistance Projects

Resilient Community Partnership
Town of Slaughter Beach

Upcoming Trainings, Workshops, and Courses

Below is a list of courses currently offered through the Delaware Coastal Training Program. For more information, please select the course title from the list.

Climate Adaptation/Land Use Issues/Coastal Hazards
Creating a Flood Ready Community Course - May 19

Leadership and Process Skills
Save the Date! Planning and Facilitating Collaborative Meetings - Aug
More information coming soon.



Real time and historic weather data @ DEOS

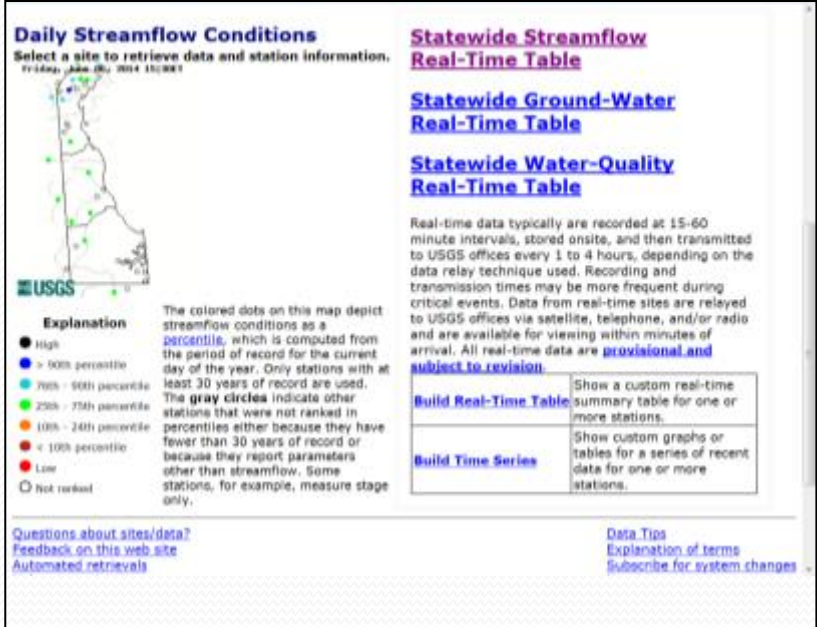
- Real time weather station data
- Historic weather station data
- Use for emergencies, assessments, planning, gardening and lots more!

The screenshot shows the DEOS website interface. At the top, there's a header with the DEOS logo and navigation links: Home, Data, Analysis Tools, Information, RSS, and XML. Below the header, the main section is titled 'Historical Daily Station Summary Retrieval'. It contains a sub-header 'Retrieve daily data summaries for networks archived for historical use by DEOS.' and two dropdown menus: 'Network:' and 'Station:'. The 'Network:' dropdown has three options: DEOS (selected), DNERR-Water-Quality, and DelDOT. The 'Station:' dropdown has a list of stations including Asglen, PA-Wolfs Hollow, Bethany Beach, DE-Dorchester, Bethany Beach, DE-NGTS, Blackbird, DE-NERR, Bridgeville, DE-SPB, Chester Springs, PA-Park, Claymont, DE-Park, Dagsboro, DE-Pepper Creek, Delmar, DE-Gamboro, and Devault, PA-Tredyffrin. Below these dropdowns is a 'Date:' section with three columns of date pickers for month, day, and year. The year column shows years from 2009 to 2014, with 2014 selected. A 'Send Request' button is located below the date pickers. At the bottom of the page, there is a copyright notice: 'Copyright © 2003-2014 DEOS | Data Disclaimer | Contact DEOS | Storm Ready' and a data tracker note: 'DEOS Data Tracker: 139,451,319 observations processed and stored as of June 6, 2014'.

www.deos.udel.edu

Real time and historic stream data - USGS

- Real time gauge data from streams and tidal rivers
 - Flood stage indicated
- Historic stream gauge data
- 32 sites statewide
- Use for emergencies, assessments, and planning



Daily Streamflow Conditions
Select a site to retrieve data and station information.
Friday, June 09, 2011 10:00 ET

Statewide Streamflow Real-Time Table

Statewide Ground-Water Real-Time Table

Statewide Water-Quality Real-Time Table

Real-time data typically are recorded at 15-60 minute intervals, stored onsite, and then transmitted to USGS offices every 1 to 4 hours, depending on the data relay technique used. Recording and transmission times may be more frequent during critical events. Data from real-time sites are relayed to USGS offices via satellite, telephone, and/or radio and are available for viewing within minutes of arrival. All real-time data are **provisional and subject to revision**.

Build Real-Time Table Show a custom real-time summary table for one or more stations.

Build Time Series Show custom graphs or tables for a series of recent data for one or more stations.

Explanation

The colored dots on this map depict streamflow conditions as a **percentile**, which is computed from the period of record for the current day of the year. Only stations with at least 30 years of record are used. The **gray circles** indicate other stations that were not ranked in percentiles either because they have fewer than 30 years of record or because they report parameters other than streamflow. Some stations, for example, measure stage only.

● High
● > 90th percentile
● 70th - 90th percentile
● 25th - 70th percentile
● 10th - 25th percentile
● < 10th percentile
● Low
○ Not ranked

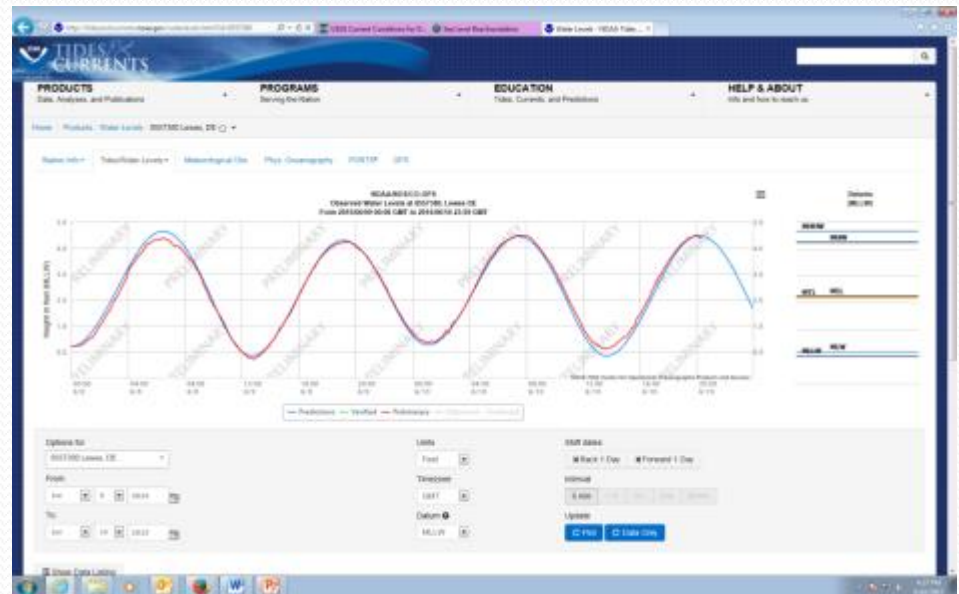
Questions about sites/data?
Feedback on this web site
Automated retrievals

Data Tips
Explanation of terms
Subscribe for system changes

<http://waterdata.usgs.gov/de/nwis/rt>

Real time and historic tide data - NOAA

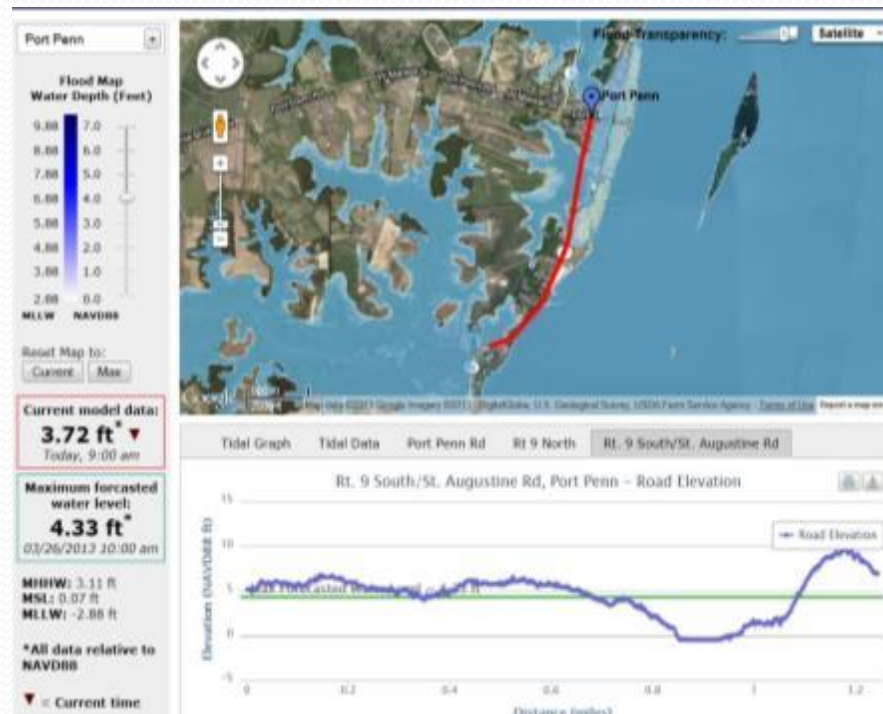
- Tide predictions and observations for 2 sites
 - Lewes & Reedy Point
- Historic data available to download and view
- Use for planning, response, assessments



<http://tidesandcurrents.noaa.gov>

Mapping Tools – Delaware Coastal Flood Monitoring System

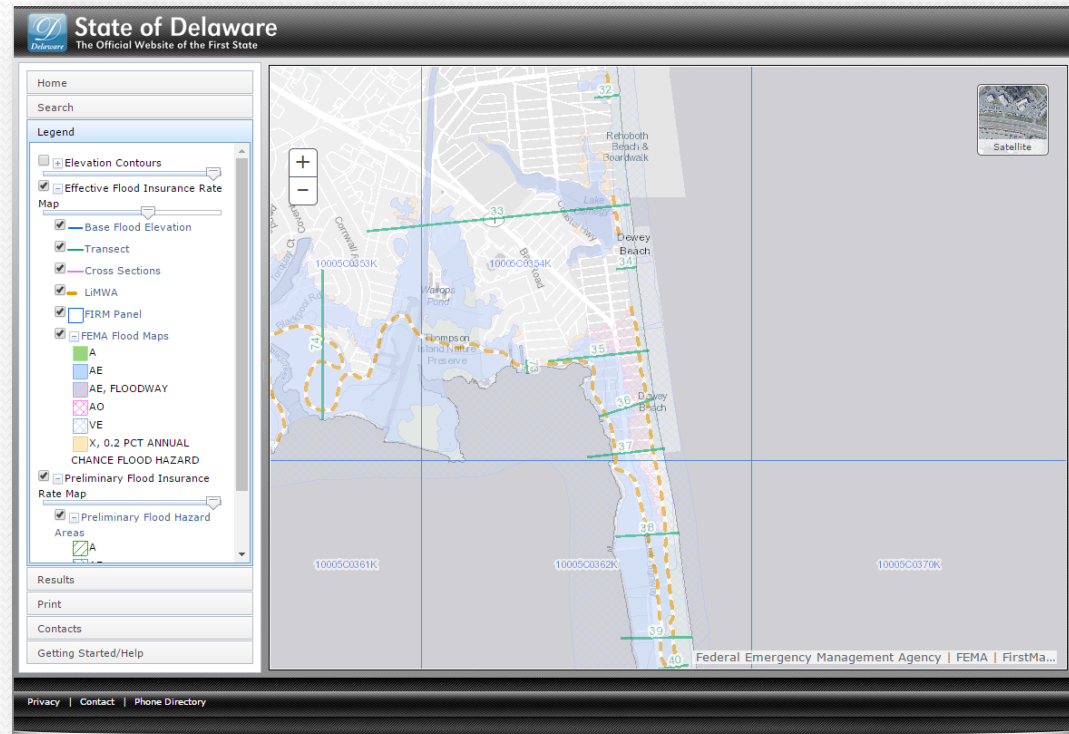
- Maps potential area of inundation based on tide predictions for next 48 hours
- Includes roadway profiles
- Available for DE Bay communities only
 - Work is underway to expand
- Use primarily for emergency preparedness and response



<http://www.coastal-flood.udel.edu/>

Delaware Flood Planning Tool from DNREC

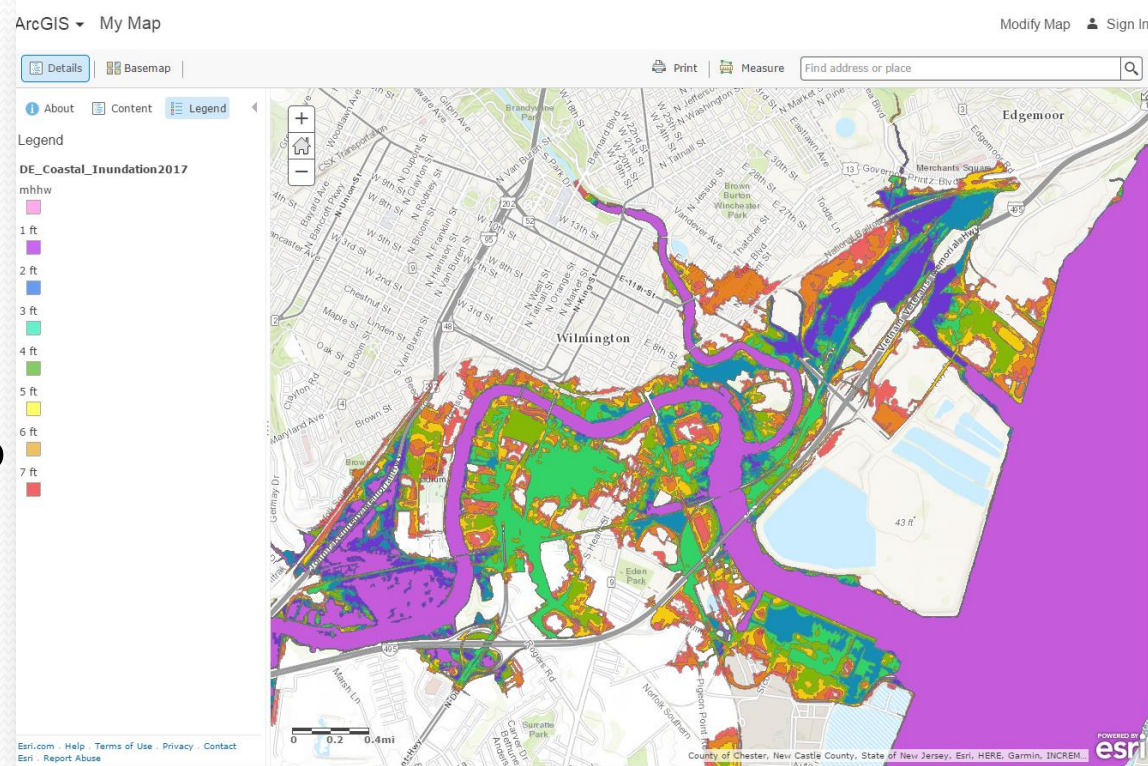
- For floodplain managers, insurance agents, developers, real estate agents, engineers, surveyors, local planners and citizens
- Use to assess where floodplain regulations and insurance requirements apply
- Also used to show flood insurance rates areas



<http://maps.dnrec.delaware.gov/FloodPlanning/default.html>

Mapping Tools – Delaware Inundation Maps

- Future-looking
- Depicts area that could be inundated at high tide under varying degrees of sea level rise
- You choose your preferred level to plan to
- For guidance only
 - NOT regulatory
- Use for planning and assessment



Show me the Money\$\$\$

- Coastal Management Partnership Program
 - <http://de.gov/resilientcommunity>
- Clean Water Infrastructure Grants
 - <http://www.dnrec.delaware.gov/fab/Pages/default.aspx>
- Unified Hazard Mitigation Assistance Grant Programs (FEMA)
 - <http://www.vaemergency.gov/em-community/grants/HMAgrant2010>
- DNREC Division of Energy and Climate Sustainable Community Grant (due June 2)
 - de.gov/sustainablecommunities



But Don't Forget these Tools!

*Greg, Mike, Phil, Danielle, and Kelly are
always available to help you be Flood
Ready!*



Questions?

Contact:

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Coordinator

Delaware National Estuarine
Research Reserve

kelly.valencik@state.de.us

302-739-6377



One last idea: Embrace it?

This New Orleans Neighborhood Is Fighting Flooding By Welcoming It

“After Hurricane Katrina devastated New Orleans, planners and designers realized they could protect the city by reintegrating water into the urban landscape, instead of pushing it out.”



This “water garden” is designed to store 10 million gallons of rain in storms

- <https://www.fastcompany.com/3068730/this-new-orleans-neighborhood-is-fighting-flooding-by-welcoming-it>